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ABSTRACT

Background questions to support a federally-sponsored assessment of major student aid delivery system options are addressed. Attention is directed to: (1) information needed by the U.S. Secretary of Education to decide about changes to the delivery system; (2) reasons that delivery system redesign is a critical issue; (3) what can be learned from previous approaches to the delivery system issues; (4) the current approach to the delivery system redesign issue; and (5) what will result from the assessment effort. One consideration for key policymakers is the effect of the current delivery system on key participants, including aid applicants and their families, colleges, lenders, and state and federal government. The focus is three systems of the U.S. Office of Student Financial Assistance: Pell Grants, Guaranteed Student Loans, and campus-based aid. Major proposals of an alternative delivery system are reviewed that concern: use of technological advances, using a system approach to system redesign; broad alternative approaches involving operational and programmatic changes; and a general methodology for system redesign that deals with effects of change on program intent and involves the student aid community in the process. The framework and model structure of the current approach and its general strategy are also considered. (SW)

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ASSESSMENT OF ALTERNATIVE STUDENT AID DELIVERY SYSTEMS

A CONTEXT PAPER

Submitted to
Office of Student Financial Assistance
Department of Education

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November 3, 1982

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EXECUTIVE SUMMARY

The Secretary of Education, Terrel Bell, has recently identified the redesign of the student aid delivery system as a major objective for the Department of Education (ED) in Fiscal Year 1983. This project is being coordinated by a Credit Management Task Force (CMTF) which has the broad aim to revitalize and improve the credit management system in ED. Advanced Technology has recently been commissioned by the Office of Student Financial Assistance (OSFA), as part of the Pell Grant QC project, to conduct an assessment of major student aid delivery system options. As a general background to this Delivery System Assessment task, this paper addresses five questions:

- What does the Secretary need to know in order to make a decision about changes to the delivery system?
- Why is delivery system redesign a critical issue?
- What can be learned from previous approaches to the delivery system issues?
- What is the current approach to the delivery system redesign issue?
- What will result from the current effort?

The student aid delivery system is a complex combination of programs that affects millions of students, thousands of institutions, state agencies and the Federal government. Due to this complex political environment, the Secretary must know:

- The effects of the current delivery system on key participants
- The differential effects of major alternatives under consideration
- Time, costs, and risks of implementing major alternatives, including possible disruptive effects
- Explicit specification of how alternatives alter program intent.

The current student aid delivery system is the result of haphazard evolution of separate programs. While the programs continue to operate, there are major questions about the efficiency and effectiveness of the current delivery system.

Previous approaches to delivery system issues have stressed the weaknesses of the current system without fully evaluating its effects. The major contribution of previous efforts that have been identified include:

- Technological advances that can be applied to student aid delivery
- Principles for a systems approach to delivery system redesign
- Broad alternative approaches to student aid delivery
- The requirements for a sound general approach to delivery system redesign.

The current approach to student aid delivery system redesign uses a sound general methodology that builds on the contribution of previous efforts. Advanced Technology's approach to the Delivery System Assessment task is to develop a differential impact model that will be used to:

- Assess the effects of the current delivery system on major actors
- Assess the effects of marginal changes and major redesign options
- Compare the effects of major options on both
  - Technological efficiency
  - Program intent
- Rank delivery system options according to alternative specifications of program intent.

The current redesign project is designed to involve the student aid community in the evaluation task and the policy process. The key actors in the process are:

- The Credit Management Task Force, which will coordinate the current redesign project
- Westinghouse Information Services, Inc., the CMTF contractor, which is responsible for building consensus in the student aid community about the redesign option.
- OSFA's Division of Quality Assurance which is responsible for facilitating input into the redesign task by: OSFA, ED policymakers and a technical advisory panel.
- Advanced Technology, Inc., which is responsible for conducting the delivery system assessment task.

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1.0 INTRODUCTION

Secretary of Education Bell has identified improvements in student financial aid delivery as a priority for the Department of Education (ED). In his recent statement, "Goals and Performance Priorities of the U.S. Department of Education For Fiscal Year 1983," Secretary Bell states:

> An improved management information system for student aid will be instituted. Through current contract development on information systems integration, new computer capabilities will achieve both cross-program integration, quick information retrieval, and significantly increased model simulation capabilities.

This objective is the outgrowth of a major effort in ED to undertake the redesign of the student aid delivery systems. During 1982, a Credit Management Task Force (CMTF), with a Credit Management Policy and Oversight Board was formed in ED; its broad aim was to revitalize and improve the credit management system. In particular, the CMTF is responsible for coordination and improvement of student aid programs and delivery systems.

Advanced Technology has recently been commissioned to undertake an assessment of the student aid delivery system, as part of the Pell Grant Quality Control Project. The purposes of this task are to:

- Provide the technical evaluation of the current student aid system and of major alternatives identified bythe CMTF.
- Coordinate this evaluation task with representatives from the Office of Student Financial Assistance (OSFA) and the CMTF.
- Provide the CMTF and the Secretary of Education with the background information required to make a sound policy decision about delivery system redesign.

This paper provides general background and contextual information for that task. Specifically, the paper addresses five questions:

- What does the Secretary need to know in order to make a decision about changes to the delivery system?
- Why is delivery system redesign a critical issue?
- What can be learned from previous approaches to delivery system issues?
- What is the current approach?
- What will result from the current effort?

There are five sections in the paper in addition to this introduction which address these critical questions. Section 2 considers what the Secretary and other policy-makers need to know about delivery system redesign in order to make sound policy decisions about delivery system options. Section 3 provides contextual background on the student delivery system and why redesign is now an important issue. Section 4 considers what can be learned from previous approaches to this issue. Section 5 explains the current approach. Section 6 considers what should result from this assessment task.

2.0 THE POLICY ISSUES

Decisions about major changes to the student aid delivery system cannot be made in isolation from the political environment. This is especially important precisely because the student aid system involves millions of students and their families, thousands of postsecondary and lending institutions, and State agencies, as well as the Federal government. While many features of the current student aid delivery system may appear less than satisfactory, the system has evolved incrementally as a result of legislative changes and new program developments designed to address the needs of various users. Therefore the assessment of delivery system options must deal explicitly with the broad range of issues that have dictated the system's evolution.

At a minimum, the Secretary and other senior policymakers must know:

- The effects of the current delivery system on key participants
  - Aid applicants and their families
  - Postsecondary institutions
  - Lenders
  - States
  - The Federal government
- The differential effects of major alternatives under consideration
- Time, costs, and risks of implementing major alternatives, including possible disruptive effects to ongoing programs
- Explicit specification of how alternatives alter program intent

2.1 The Effects of the Current Delivery System

First, the Secretary must know what the effects of the current student aid delivery system are. Often reform efforts in large organizations begin with an assumption that there are major problems with the current system. Usually this assumption has not been fully examined, that is, the effects of the current system have not been fully evaluated in light of program purpose. This type of reform strategy will encounter less resistance in cases where there is not a constituency that is strong politically and well informed. This is not true for student aid delivery. In the case of student aid there are:

- Millions of aid applicants, from diverse family backgrounds
- Over six thousand postsecondary institutions, ranging from small proprietary schools to major universities

- Thousands of lending agencies, including banks, postsecondary institutions, and other for-profit and not-for-profit organizations
- State agencies, which finance, plan and coordinate higher education, as well as service loans and provide aid to students
- Diverse Federal actors -- including the President, Congress, Office of Management and Budget, ED, OSFA, Treasury Department, etc. -- that have historically sponsored student aid legislation or been involved in some aspect of student aid delivery.

Delivery system reform strategies that fail to assess the effects of the current system on these groups will confront major problems. If a reform proposal were to clear all hurdles within the executive branch, this type of analysis would still be necessary. The Congress no doubt raises questions about the effects of current system and the specific nature of the problems with the system before passing any new legislation.

2.2 The Differential Effects of Major Alternatives

Second, it will be equally important for the Secretary and other senior policymakers to know the likely effects of a selected alternative. The most persuasive argument for system reform will be one that explicitly illustrates how the selected alternative will improve system performance. This suggests that a differential assessment of system effects is important; the Secretary should know how the delivery system will be improved or changes affect each major group of actors.

2.3 Time, Costs, and Risks

Another important issue that should be addressed as a major input to the Secretary of Education is the time, costs, and risks associated with the transition to any major delivery system change. The Secretary must know if a delivery system option will take an extremely long time to go into production, or if it will have excessive development or maintenance costs. It is also important to know the degree of political sensitivity associated with implementation.

2.4 Specification of Program Intent

Finally, in the presentation of a major delivery system change to the Congress, the administration should address the issue of program intent. In particular, it is important to address the ways in which the new strategy might alter program intent. The intent of student aid programs has evolved in successive reauthorizations of the Higher Education Act, the enabling legislation for the student aid programs under Title IV. The analysis of delivery system options must address these issues.

2.5 Overview

From this brief discussion it is obvious that questions of both technical efficiency and program intent are essential to the delivery system assessment task. The approach used in the current project address both issues explicitly.

3.0 BACKGROUND

The Delivery System Assessment task will examine how the student assistance programs are currently being delivered to students. It will evaluate a number of alternatives in order to determine the differential effects of alternatives on the participants of the system. The current delivery system is a product of an evolutionary process of incremental changes to the ongoing system. Attempts to make major changes in the delivery system have not been successful. As part of the general background, this section reviews the development of the current delivery system.

3.1 The Programs

The Federal student assistance programs represent a major part of the Federal commitment to postsecondary education. The overarching purpose of the programs is to equalize educational opportunity for all students. This includes access to college, a choice among institutions one is able to attend, and the opportunity to persist in college. The Federal programs are supplemented by other student assistance programs sponsored by states, postsecondary institutions and private organizations. The commitment of all of these groups is essential to the continued viability of the nation's postsecondary education sector.

The Federal commitment to postsecondary education student assistance began in 1958 with the passage of the National Defense Education Act. This Act established a student loan program that assisted those students who were contemplating a career in the sciences and engineering. Since 1960, Federal student assistance programs have grown from one program with $41 million in funds to the current complement of six programs and $5,307 million (see Figure 1). In addition, there are also other student assistance programs outside of ED. This discussion considers only the major ED programs. The current programs are:

- Pell Grants - A quasi-entitlement grant program that is designed to be the floor of all other Federal, state and private aid. Eligibility for the program is determined through a nationally uniform needs test. Usually, institutions disburse the funds to students based upon parameters embodied in a payment schedule. There is also an alternate disbursement system for Pell, in which the Federal government disburses funds directly to students.

- Supplemental Educational Opportunity Grants (SEOG) - One of the Campus-based programs that is administered on the campus at the discretion of the financial aid officer. Funds are allocated to institutions on a Congressionally mandated formula. The purpose of this program is to provide additional grant funds to exceptionally needy students.

FIGURE 1

FEDERAL EXPENDITURES FOR STUDENT
FINANCIAL ASSISTANCE (In $Millions)
1960, 1965, 1970,1975,1980

	1960	1965	1970	1975	1980
NDSL [1]	41	147	195	329	286
CWS		56	152	390	550
SEOG [2]			165	240	370
GSL			75	586	1,609
Pell [3]				356	2,415
SSIG				20	77
TOTAL	41	203	587	1,921	5,307

NOTES:

1 The National Defense Student Loan Program was renamed to the National Direct Student Loan program in 1972.

2 The Educational Opportunity Grant Program was renamed to the Supplemental Opportunity Grant Program in 1972.

3 The Basic Educational Opportunity Grant Program was renamed to the Pell Grant Program in 1980.

SOURCE: Bureau of Higher Education, Factbook; Pell and GSL program data.

- National Direct Student Loans (NDSL) - The successor to the National Defense Student Loan program. It is also a Campus-based program. The program provides institutions with Federal funds so they can make low-interest loans directly to needy students. The Federal government provides 90 percent of the capital used in the program, the balance being provided by institutional matching funds. Like SEOG, funds are allocated to the institutions on a formula basis every year, but additional loan capital is generated from collection of prior loans.

- College Work-Study (CWS) - A program that provides jobs to students with the Federal government subsidizing wages up to 80 percent. Another of the Campus-based programs, its purpose is to give a working experience to students. Again, allocations are made on a formula basis.

- Guaranteed Student Loans (GSL) - The largest of the student assistance programs, GSL uses private capital from banks, institutions and other financial entities for loan funds. The Federal government provides both an interest subsidy to students, to reduce the interest rate to students, and a special allowance subsidy to lending institutions to ensure they receive an adequate rate of return. In addition, the Federal government insures the loans against default. The purpose of the program is to provide additional loan capital to students and families without Federal capitalization.

- State Student Incentive Grants (SSIG) - A Federal-state matching program designed to encourage states to start and expand their own grant programs. The Federal funds are allocated to states based on a formula subject to the matching requirements.

The expansion in the number of programs and their growth has been as separate entities, each with its own purpose. Only the three Campus-based programs have been partially integrated at both the Federal and institutional levels. These programs are similar because they are allocated to institutions based upon formulas and are administered at the discretion of the financial aid officer. However, each formula is different. The only attempt to explicitly tie the purposes of the programs together was in the preamble to Title IV of the Higher Education Act, as added in the Education Amendments of 1972.

The 1972 legislation established the current structure of the programs. Since that time, the programs have undergone tremendous growth. Figure 1 shows how the programs have grown to their current level of over $5 billion. The growth in the programs has not been equal across all programs. Even with these changes in the size of the programs, their basic structures have not been changed. However, accompanying the growth in the programs has been an increase in the number of actors participating in the programs. As a result, the programs have become more complex to administer.

The prime example of this is the evolution of the GSL program. At the time of the 1972 Amendments, the program was not large and provided loan capital to primarily middle-income families who needed liquidity to even out the lumpiness of college costs. Since that time, the program has grown to be the largest student assistance program. Its recipient population now includes families from all income groups (the recent budget legislation has restricted eligibility for interest subsidies and special allowances to those families with incomes below $30,000). Along with that growth has been the rise of states becoming involved in the program in the form of guarantee agencies and the growing importance of the Student Loan Marketing Association (SLMA). Most states have established state guarantee agencies who play a variety of roles from providing loan capital raised from state bonds to servicing loans in repayment to guaranteeing loans made in that state. As a result, the GSL program has become a very large and complex program to administer both because of the number of actors that could be involved in the initiation of the loan, and because of the length of time that a recipient must be tracked.

3.2 The Student Aid Delivery System

The OSFA student aid delivery system is in reality a combination of four delivery systems, Pell, GSL, Campus-based and SSIG. For purposes of this discussion three are considered to be the "student aid delivery system." Individual delivery systems are referred to as the Pell delivery system, GSL delivery system and Campus-based delivery system.

While the Congress and successive administrations gave substantial attention to the structure of the programs, relatively little attention was given to how the programs are delivered. With the exception of the GSL program, the basic delivery systems of the programs have remained essentially the same since the programs were enacted. The individual delivery systems were designed for the programs as originally envisioned by Congress. As a result, the programs evolved over time as separate entities.

The legislative process was the driving force behind these incremental changes in the student aid delivery systems. The primary concern was often restricted to the intended impact of the programs, and the actual effects of the delivery system were seldom considered. As a result, past approaches to the changes in the individual program delivery systems have been piecemeal.

Although incremental delivery system changes have resulted from legislation, the delivery system has never been the focus of policy formulation. Instead, policy has

focused on programmatic changes and politically viable strategies. OSFA has made refinements to the delivery system in order to accommodate legislative changes. Usually the effects of these changes were not analyzed; expediency rather than sound systems design dictated the method of adaptation. An example of this is the changes made in the GSL program in the 1981 Budget Reconciliation Act that imposed a needs test for eligibility for the program. The major policy thrust of the reform was reduction of program costs. Meanwhile, the effects of the change on the application process and the interactions between institutions and lenders were not considered. There are major administrative consequences of such a change. However, the detail about how the change was to be implemented, and how the GSL delivery system should be modified, was left to groups outside of ED. The result has been increased complexity of the GSL program and of the GSL delivery system.

The result of the haphazard evolution of the student aid delivery system is a set of separate systems that have been patched together over time. They all still continue to operate, but whether they operate effectively and efficiently is a matter of debate. More importantly, there has been no coherent strategy for improving the delivery system. Therefore, the delivery system continues to be fragmented and seriously jeopardizes the integrity of the student aid programs.

4.0 PREVIOUS APPROACHES TO DELIVERY SYSTEM REDESIGN

This section reviews previous approaches to delivery system redesign and what can be learned from them. The lack of major change in the student aid delivery system does not reflect lack of thinking about delivery systems. Surprisingly, problems with the current delivery system have been discussed for a long time. In fact, perhaps one major contribution of past approaches is the growing awareness that there are problems or weaknesses with current student aid delivery system. Several groups, within and outside of ED, have proposed designs for delivery systems for the programs. Most of the proposals have been in the form of research or discussion papers. The focus of these papers has been to outline the major features of an alternative delivery system. The implicit assumption is that the current delivery system is inefficient and ineffective and should be changed. The options that have been proposed range from a streamlining of the system within the current overall structure to a completely different technological "state-of-the-art" paperless system. The major proposals fall into four categories. They have identified:

- Technological advances that can be used in student aid delivery
- Principles for a systems approach to delivery system redesign
- Broad alternative approaches to student aid delivery
- The requirement for a sound general approach to delivery system redesign

It is useful at this point to highlight the major points of the studies. These studies represent the span of current thinking on the subject and form an essential base from which to discuss the current project.

4.1 Technological Advances

Most approaches to delivery system redesign have emphasized the technological advances that can be applied to student aid delivery. Studies have covered the full range of applications from application form processing and fund disbursement to integrated state and Federal information networks. For illustrative purposes two such efforts are reviewed.

In his paper, Kerr (1981) identifies the major shortcomings of the current system in terms of its technological inefficiencies. He then proposes computer networking in financial assistance processing. The system utilizes the current state of technology of

information processing and transmission. In particular, Kerr discusses each of the major processing functions in both the Pell and GSL programs. For Pell, this includes student application processing, institution processing, and financial processing. For GSL it includes student application processing, student repayment processing, lender claims for repayment and student collections.

Kerr argues that the processing methods by which these functions are currently performed are outdated, prone to error and inefficient. Kerr then identifies the four major deficiencies of the these processing systems:

- Financial processing is inefficient
- Program information management cannot accommodate program change
- Program information management overhead is high and burdensome
- Program information management is independent and redundant

The current method for processing information performs many of the same activities many times, collects the same data more than once, and due to its structure cannot easily be changed.

The single system that Kerr proposes stresses the importance of minimizing duplication of data and maximizing the flow of information to the users. The tool for achieving these goals is a computer hardware network. The network has a series of nodes through which users could communicate with the system. Information is transmitted by packet-switching techniques rather than requiring an on-line system. The advantages of this configuration are:

- Improved financial efficiency through electronic funds transfer (EFT)
- Improved accommodation for change
- Reduced overhead and data collection burden
- Reduced redundancy

The resulting system is able to adapt to a series of programmatic changes and still process in an efficient manner. An important consideration identified in this study is the cost savings as a result of significantly reducing the float in the programs.

The College Board (undated) has proposed a similar technological approach to the Kerr proposal. However, it goes into more detail than Kerr and formulates the structure by which a system might operate and the various participants interact. The

College Board system identifies all the participants and their activities, then ties them together into a network with a central processor maintaining the centralized services. In particular, the following participants are included in the system:

- Guarantee agencies
- Lending institutions
- SLMA
- State scholarship and grant agencies
- Federal processor
- Private need analysis processors
- Institutions
- Other users (e.g., high schools, individuals)

Each of these participants would continue to perform its function locally, but be able to link with the central system via the central processor through a communications network and various means of transmitting information. The central processor maintains an integrated student information record which contains all the information on an individual student, from application information to award information. Among the functions of the central processor are:

- Maintain on-line data bases on students and institutions
- Provide telecommunications network
- Provide electronic funds transfer network
- Act as the fiscal/transfer agent
- Provide administrative applications to colleges and universities that require the service

The modular approach to the structure will enable users to utilize only those parts of the system tailored to their needs. Moreover, it allows for growth in the system so that the system can begin small and grow with more and more users. The anticipated benefits from this system include:

- Students having to submit information only once
- Students receiving rapid turnaround about their need, eligibility and awards

- More accurate targeting of funds
- Greater accountability of funds
- Reduction in administrative resources
- Reduced paperwork
- Easier record-keeping, improved research and reporting
- Simpler verification of information
- Improved institutional cash flow
- More cost-effective administration at the institution, state, and Federal levels

Both the Kerr and College Board proposals clearly illustrate that a new technology is now available which can completely transform the student aid delivery system. Both focus more on technological issues than on issues of program intent. They also ignore the political process that must be dealt with to influence a major system change.

4.2 Systems Approach

Another significant contribution of previous approaches to the issue of delivery system redesign has been the emphasis on the methodology that should be used to undertake a system redesign. Caccia, Lester and Corrallo (1980) identify a framework for implementing a change in the systems. They consider the deficiencies in the current systems and show how a structured system can be used to resolve these deficiencies. They also consider the redesign issue from the perspective of each of the major participants in the delivery systems. They identify several deficiencies of the systems:

- The application process is complicated to the students and institutions. Moreover, it is a time-consuming process.
- There are inaccuracies in the data collected and in the record-keeping functions.
- There are inconsistencies in the legislation, regulations and practices across all the programs.
- The fund awarding and management procedures are difficult, complex and are at cross-purposes with fiscal integrity.

- The lack of flexibility to respond to programmatic changes and the inability to easily respond to a range of information needs of all the users.

The framework that is developed in the paper begins with the set of deficiencies in the systems and then identifies a series of principles on which the development of any large system should be based. These include:

- Simplicity
- Accuracy
- Consistency
- Timeliness
- Integrity
- Flexibility
- Efficiency

By matching the deficiencies with the principles, a set of basic design requirements is identified:

- Integrated data base
- Flexible data base management system
- Comprehensive student records
- Comprehensive institution records
- Common data definitions
- On-line processing
- Consistent rules for determining benefits
- Centralized system design control
- Modular system design

The rest of the paper is devoted to describing a step-by-step approach necessary to completely specify and construct a delivery system from the system concept to implementation. A structure for monitoring the development is presented which includes a list of the individuals and groups and the roles they play in order to ensure the successful completion of the project.

The final section of the paper details what resources and activities are needed to to complete such a project--the identification of groups, both inside and outside of ED, and what their roles should be. In addition, timelines show the interrelationship of each phase of the project and the coordination between the groups.

4.3 **Broad Redesign Options**

Most recently, Westinghouse (1982 A,B) identifies six alternatives to the existing delivery systems. The first paper (1982 A) identifies the alternatives. The second (1982 B) takes the alternative structures and expands on them in light of the basic functions of the delivery of student assistance. The first report specifies a set of basic operating assumptions of a student assistance delivery system including two types: operational and programmatic.

Operational

- Need analysis and packaging
- Disbursement, fund reconciliation and repayment, and collection
- Training
- Inquiry

Programmatic

- Commitment to low - income-Pell
- Portable - Pell
- Simplicity - Pell, GSL, Campus-based
- Flexibility - GSL
- Incentives to state agencies - GSL
- Monitoring capability - GSL
- Verifiability - Campus-based
- Timely - Campus-based
- Understandability and equitability - Campus-based
- Accountability - Campus-based

The basic operating and processing functions of the Federal and institutional student assistance systems are detailed. In the paper, the Federal government is viewed as the provider while the institution is the end-user of the system. Thus, any delivery system must take their needs into account. With those assumptions kept in mind, and the goal of satisfying the functional requirements of the two groups, Westinghouse presents a set of six alternatives (plus the current system) and briefly outlines their characteristics. Figure 2 presents this list of options. The options differ in many ways because some assume the current basic structure of delivery and others are more radical, requiring a complete overhaul of the system.

The second paper goes into much more detail about the alternatives by breaking the delivery system down into four component parts:

- Award determination
- Fund control
- Quality control
- Program management information

Each part is described and broken down further into activities. Each alternative is then applied to this framework and its relative advantages and disadvantages are discussed.

The final substantive part of the second paper addresses a number of policy issues that concern the effects of a redesign effort. For each one, a series of options is discussed. The issues include:

- What are the Federal information needs?
- What is the Federal role in the GSL program?
- Are multiple vendors for application processing necessary in student aid delivery?
- Will the new system facilitate a Federal partnership with other organizations involved in student financial aid?
- Will institutions that are unable or unwilling to participate in a new system be accommodated?

Some of these issues concern program intent and some are procedural. The options that are presented outline the various ways the issues can be addressed and what their impact could be on a new delivery system.

FIGURE 2

WESTINGHOUSE DELIVERY SYSTEM OPTIONS

I. Current System

- Central processor
- MDE (multiple data entry) contractors
- Common Application Form with 40 data elements
- Processor calculates Pell Grant eligibility
- Processor calculates need for Campus-Based and GSL Programs
- High Contract Costs incurred by the Federal government
- Validation performed at the institution

II. Dual System (Centralized for Pell Grant, Decentralized for others)

- Central processor for calculating Pell Grant eligibility
- Private need analysis services determine need for Campus-Based and GSL programs
- Separate application forms for the various programs
- Central processor contract cost incurred by Federal government
- Validation at central processor for Pell, for Campus-Based and GSL at institution

III. Decentralized System

- Eliminate central processor and MDEs
- Government contracts awarded with a fixed price
- Needs Analysis Services receive eligibility and processing specifications from Federal government
- Federal government monitors contractor performance
- Needs Analysis Services transmit magnetic tapes to the Federal government for integration into a central data base
- Validation at the institution or central processor

IV. Centralized Single System

- Central Processing for all Title IV Programs
- Single Application for all Title IV Programs
- Validation at the institution or central processor
- Private Needs Analysis Services provide institutions and State Agencies with other services
- Contract costs for processing incurred by Federal Government

V. Private Market System

- Eliminate central processor and MDEs
- Establish benchmarks and approve need analysis systems

- Processing costs incurred by the student
- Validation at the institution or processor
- Multiple application forms distributed by multiple Needs Analysis Services

VI. Self Calculation System

- Simplified application form for all programs - 5/6 data elements or 1040 form
- Applicants receive a worksheet with which they can calculate their need and eligibility
- Validation by the institutions and/or central processor
- Automate information management functions at the institution
- Electronically transfer funds in Federal disbursement
- Central (shared) data base and dictionary

VII. Hybrid System

- Processing either by central processor or through private and state GSL agencies (CEEB, ACT, etc.) with teleprocessing to central
- Common application form for Pell, GSL and Campus-Based with fewer than the current 40 data elements
- Processor calculates eligibility
- Validation performed by the processor on a selective sample basis
- Would permit charges to be split between recipients and government

SOURCE: Westinghouse Information Services, "Issue Paper and Project Plan for Department of Education Credit Management) Student Aid Delivery Project," report of April 30, 1982, pp. IV-3, 4.

The discussion of broad options does not sufficiently detail the analysis required by ED policymakers. The options are not fully specified in terms of their characteristics or effects. However, the papers do contribute some basic alternative design options that can be further specified or analyzed.

4.4 A Sound General Approach

The above discussion illustrates the complexity of the delivery system redesign issue: There are new technologies that can be used to improve the student aid delivery system; a sound systems approach can be applied to the redesign issue; and broad system alternatives can be identified for policymakers to consider. However the work to date does not provide the Secretary of Education and other senior ED officials with the type of information that is necessary to reach a sound decision on this issue.

In combination, the previous studies and projects can be used to identify the basic elements of a sound general approach to delivery system redesign. The critical issues that emerge from this review are:

- The need to deal with the effects of delivery system change on program intent
- The need to involve the student aid community in the process
- The importance of a mechanism for building consensus about program intent
- The need to specify fully the system features and effects of major alternatives

The importance of the first issue was considered in Section 2. The Secretary of Education must be able to address the policy issues as well as the technical issues when proposing a major change in the student aid delivery system. None of the studies to date deals with this issue. Instead they argue that the new technology is inherently better without analyzing the reasons why the system is the way it is. For example, many of the problems of the current delivery system result from program issues or political variables rather than the processing technology. In other words, it is critical that the general methodology:

- Deal with program effects on major groups of actors
- Deal with both issues of technical efficiency and program intent

It is also necessary to involve members of the student aid community in the process of assessing major options. Caccia, Lester and Corrallo argue that it is important to involve the student aid community in system redesign. Likewise, the same argument can be used about this assessment task. Unless there is agreement about what effects of the current system are, and how they might change if a major alternative is adopted, it will be impossible to build consensus about a particular option.

It is also necessary in a sound general methodology to have a mechanism for building consensus on program intent. Currently there is not agreement on the most important outcomes. It is highly probable that the major alternatives will rank differently according to different specifications of program intent. The evaluation approach used in the delivery system project must therefore:

- Accommodate the fact that there is currently no consensus about program intent, and
- Provide a mechanism for building this consensus

Finally, it is necessary to specify fully the system characteristics of each alternative. To date this has not been done. The projects that propose new technologies be used in the delivery system have neither specified types of program changes that would be required if these approaches were accepted, nor linked the system features that have been proposed to program impacts that they are supposed to improve.

In summary, the Delivery System Assessment task requires a sound general approach. It must:

- Deal with the effects of change on program intent
- Involve the student aid community in the process
- Provide a mechanism for building consensus about program intent
- Specify fully the effects and characteristics of major alternatives

5.0 THE CURRENT APPROACH

The current approach to student aid delivery system redesign uses a sound general methodology that builds on past approaches and accommodates their major weaknesses. The most significant features of the current approach are:

- An evaluation of current delivery systems in terms of technical efficiency and program intent
- An analysis of desirable alternatives:
  - Marginal improvements to current system
  - Major alternatives for structural redesign
- A complete specification of the most desirable delivery system options including:
  - Likely impacts on students, institutions, lenders, states and ED/OSFA
  - Cost and timeliness of implementation
  - Risks associated with system failure
- Adaptable to alternative specifications of program intent
- Ranking of options according to alternative specifications of intent

This section contains:

- The General Strategy used in the current approach
- The Evaluation Framework
- The Model Structure

5.1 The General Strategy

The interface between the Delivery System Assessment task and the work of the CMTF and the Office of Student Financial Assistance was discussed in the recent paper, "Evaluation of Alternative Student Aid Delivery Systems: An Organizational Strategy" (Advanced Technology, 1982). This paper identifies the role of the Credit Management Task Force as the policy-setting group for the project. The CMTF will examine the ways in which the current delivery systems operate and propose the necessary steps to implement those changes by the 1985-86 school year. This includes scheduling for contracted services to implement the system and obtaining the necessary decisions in a timely manner to specify what kinds of changes should be implemented under the purview of the Task Force.

As part of this project, the CMTF contracted with Westinghouse Information Services to develop a range of alternative delivery systems for the CMTF. The April 30 paper, "Issues Paper and Project Plan for the Department of Education Credit Management/Student Aid Delivery Project," outlines these options. Subsequently, on July 23, Westinghouse presented a second paper that refines the alternatives and places them into the functional structure of the delivery system. Both of these papers were discussed in Section 4. The alternatives identified by Westinghouse provide the starting point for the structure of major alternatives to the current delivery system.

In the current approach, Westinghouse will also be responsible for contacting the student aid community and policymakers outside of ED to assess the political viability of changing the delivery systems.

The Division of Quality Assurance (DQA), in OSFA, plays the central role of coordinating technical input into the current delivery system redesign efforts. DQA is sponsoring the Delivery System Assessment task as part of the Pell Grant Quality Control project. The division is coordinating OSFA input into the assessment as well as facilitating the use of a technical advisory panel.

Advanced Technology's Delivery System Assessment task also plays a critical role in this overall effort. The CMTF requires detailed information about the effects of the current system on all participants in the current delivery system and the likely effects of the major alternatives on the groups. The Delivery System Assessment task provides this type of information. The purpose of this task is to evaluate a number of alternative delivery systems identified by the CMTF. The evaluation should produce the necessary information on the feasibility and kinds of technological changes related to the participants in student assistance. The evaluation will be such that the CMTF will have a common way to evaluate ranges of alternatives.

The delivery system assessment task has three phases. The objectives for each phase are:

- Phase I Objectives:
  - Build Evaluation Model
  - Evaluate Current Delivery System
- Phase II Objectives:
  - Analyze Alternative Delivery System
  - Compare to Current Delivery System

- Phase III Objectives:

  - Specify Program Intent (perhaps in several ways)
  - Rank Alternatives

5.2 The Evaluation Framework

The dual nature of the current delivery system requires modeling delivery system effects both with respect to program intent (what the legislation identified as the purposes of the programs) and technical efficiency (assuring that student aid is delivered in the most cost-effective way possible). One critical methodological issue thus precedes the construction of the model: in what order should intent and efficiency be dealt with?

There are two equivalent approaches:

- One can begin with a specification of intent, then choose a delivery system(s) and analyze its effects in order to maximize program intent.

- One can first model the effects of alternative delivery systems, then choose a delivery system based on alternative specifications of program intent.

The first approach can be characterized as a constrained maximization model, the second as a differential/impact/ranking model. The first approach allows the decision-maker to choose intent. The second approach allows the decision-maker to rank dissimilar alternatives according to one or more specifications of intent. Each approach has its place depending upon the nature of the decision to be made:

- If the student aid programs did not exist and we were in the initial stages of planning, the first approach makes the most sense because it provides a mechanism for building consensus about program intent before implementation.

- If there is an existing delivery system and dissatisfaction with it, and there is consensus about program intent, then the first approach is again more appropriate.

- But if dissatisfaction with the current delivery system is confounded with disagreement about program intent, then the second approach is the most efficient way to structure the policy process.

For the purpose of this task, we believe it is reasonable to assume dissatisfaction and disagreement on program intent among the parties of interest. Therefore, we have chosen the second approach--first building a differential impact model that can

evaluate options consistent with different specifications of intent; second, showing how intent colors one's attitudes toward the options. This is consistent with the CMTF's approach in that they avoided artificially constraining alternatives to reflect a particular consensus about program intent. We believe that this approach will meet the needs of the CMTF as well as allow appropriate community participation in policy decisions. Using this approach, a differential impact model will emerge that has the following characteristics:

- It will be primarily a descriptive--not behavioral--policy decision model.
- It will compare the effects of the current delivery system to changes to it.
- It will separate technical issues from political issues.
- It will be broad and flexible enough to evaluate the full range of major options and variations on options.
- Its structure is unbiased from the standpoint of all parties.
- It will not restrict in any way a complete systems approach to technical issues.

5.3 The Model Structure

The steps in specifying the evaluative model for delivery system redesign will be:

- Identify the effects (impacts) of the current delivery systems.
- Develop measures/indices of delivery system effects and characteristics.
- Relate measures to the current delivery system.
- Expand the model to include a broad range of options.

The four-step process will provide a mechanism for involving the higher education community in identifying important effects thus providing a reality check on the evaluative criteria. Interested ED officials could be interviewed about their perceptions of program impact and intent and interested parties could be convened to review the model.

The model building process will specify the complex relationship between system effects and system characteristics. Figure 3 provides a partial list of effects. For each effect it will be necessary to identify specific:

EFFECTS OF THE STUDENT AID DELIVERY SYSTEM:

A PARTIAL LIST

APPLICANTS/FAMILIES	INSTITUTIONS	LENDERS	STATES	FEDERAL GOVT.
APPLICATION TIME	ENROLLMENTS	INCENTIVES	ENROLLMENTS	FUND CONTROL
MISCALCULATION/ERROR	PROCESSING TIME	LOAN CAPITAL	COMPLIANCE BURDEN	MAINTENANCE COSTS
TURNAROUND TIME	COMPLIANCE BURDEN	COMPLIANCE BURDEN	ADMINISTRATIVE COSTS	INTEGRATION ACROSS PROGRAMS

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FIGURE 3

- System Features
- Program Features
- Political Variables, and
- Environmental Variables

An example of the model building process is shown in Figure 4. For turnaround time, several system characteristics are identified which relate significantly to this effect. For each effect identified in the model, a set of system features and their measures will be identified.

EXAMPLE OF MODEL BUILDING PROCESS

STUDENT EFFECTS

- TURNAROUND TIME

SYSTEM FEATURES

- APPLICATION (FORMS & INSTRUCTIONS)
- PROCESSING METHOD

PROGRAM FEATURES

- SEPARATE APPLICATIONS
- NEED ANALYSIS METHODOLOGY

POLITICAL VARIABLES

- DECISIONS ABOUT AWARD SCHEDULE
- LEGISLATIVE REQUIREMENTS

ENVIRONMENTAL VARIABLES

- APPLICANT ABILITY
- TECHNOLOGY

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FIGURE 4

6.0 WHAT NEXT?

The current approach to the redesign of student aid delivery involves a wide range of actors. The previous sections have detailed Advanced Technology's approach to the evaluation task. This section deals more generally with the relationship between this activity and the general approach being used to build consensus about program intent. Specifically, this includes:

- Relation to other ED activities
- Involvement of student aid community

6.1 Relation of this Task to ED Activities

The Delivery System Assessment task is a portion of the larger student aid delivery system redesign project. The project directly involves several groups in ED and groups outside, such as Westinghouse and Advanced Technology. In addition, as the project progresses, other groups in the government and the student aid community will become involved. A smooth coordination of efforts is required to ensure that a high quality of work is done to fit within the overall timeframe of the CMTF. The efforts of each group directly involved in the project must be orchestrated to prepare the internal mechanisms for change in a timely fashion.

The input from OSFA is important for this task since a great deal of knowledge of student aid delivery systems resides there. DQA will act as the intermediary between the divisions within OSFA and Advanced Technology in the evaluation effort. The important information that OSFA will bring to this task must be facilitated and channelled into a usable form for the task. DQA will be very useful as that contact point. DQA will also have the responsibility for overseeing the advisory panel.

The CMTF will coordinate the project and ensure its successful completion. Since the CMTF has the ultimate responsibility for initiating changes in the delivery system, it must ensure that it has the information it needs to make these decisions. It will review the intermediate and final results of the task and monitor its progress. Moreover, it must make intermediate decisions about the kinds of alternatives and analyses it believes will yield the results. Through its contract with Westinghouse, the CMTF is involving the student aid community and building consensus among the systems' participants.

6.2 Involvement of the Student Aid Community

The student aid delivery system involves diverse participants from students to the Federal government. The policy process is complex and must involve the institutions, banks and students who are recipients of the funds. Those outside of the government who participate in policy decisions about student aid are collectively known as the student aid community. The purpose of this task is to examine the current delivery system and compare alternatives to it in order to determine where improvements could be made. To ensure the success of this task and to facilitate any significant change the CMTF and ED may contemplate in the future, the student aid community must be involved. This is true for several reasons:

- They are collectively the most knowledgeable about the details of the delivery system.
- The student aid community has a significant amount of political power. Since any change in the delivery system in all likelihood would require some legislative action, the student aid community may be able to block ED's proposal.
- As a result, the community must be brought along with the proposed development and be made to understand and accept the changes.

Through the activities of Westinghouse, the student aid community will be able to express its opinions on the range of alternatives currently being proposed. Westinghouse is attempting to build consensus among the various groups in the community in order to see which direction they may lean. The results of the evaluation will be fed directly into this process.

The involvement of the student aid community in the assessment task is important for two reasons:

- To obtain technical expertise as part of the evaluation process.
- To obtain the opinions of the community in the way in which the evaluation process is being conducted.

Members of the community are the users of the system and in many ways know better than anyone else how the delivery system operates. Advanced Technology has developed a strategy to obtain the assistance from selected members of the community to evaluate aspects of the alternatives.

At the same time, it will be useful, as it will be in the larger project, to involve the student aid comunity in the entire process of development. The individuals

involved should not be viewed as an approval body. Rather, they should be used as outlets to the rest of the community in an information dissemination role. Their involvement may both provide useful insight into the evaluation as well as be a consensus-building device.

The task is structured in such a way that there are three activities in which members of the community can be used:

- Technical consultants from institutions and states to conduct selected analyses.
- Members of an advisory panel to review work done by Advanced Technology and to provide a reality check on the evaluation process.
- General consultants in the developmental stage to advise on the progress of the work.

There will be several analyses required to evaluate the alternative delivery systems. To facilitate these analyses, members of the community who are recognized as experts will utilized and consultants on specific analyses. The analyses will be structured and sufficiently defined to ensure completion and smooth integration into the overall analysis plan.

The advisory panel will be comprised of individuals from various groups in the student aid community. The members will be people who are familiar with delivery systems and who can provide information on first level effects of the systems. In this way, they can give a sense of reality to the task. The evaluation cannot be done on an academic level and the effects it measures must be the true ones and not hypothetical constructs.

From time to time, the need will arise for short-term consultations on the model development and system specification stages. Similarly, to facilitate these and to obtain the information in the most cost-effective manner possible, members of the student aid community will be brought in to consult. The wide range of knowledge that is needed to conduct a comprehensive evaluation must borrow some from the users of the system and cannot come from a single group.

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